

Exploring Aeronautics			
2010 Science			
Academic Content Standards			
Ohio Science			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
Fundamentals of Aeronautics (145-176)	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Wings(177-208)	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
Wings(177-208)	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Airplane Control(209-256)	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
Airplane Control(209-256)	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Airplane Control(209-256)	OH	SCI.5.PS.1.2.a	Light travels and maintains its direction until it interacts with an object or when it moves from one medium to another, and then it can be reflected, refracted or absorbed.
How an Airplane Flies	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
How an Airplane Flies	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
The Activity Center	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Science of Flight	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).

Science of Flight	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Science of Flight	OH	SCI.5.PS.1.2.b	Sound is produced by vibrating objects and requires a medium through which to travel. The rate of vibration is related to the pitch of the sound.
Integrating with Aeronautics	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
Integrating with Aeronautics	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Intro to Aeronautics (109-123)	OH	SCI.5.PS.1.1.a	Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).
Intro to Aeronautics (109-123)	OH	SCI.5.PS.1.1.b	Earth pulls down on all objects with gravitational force. Weight is a measure of the gravitational force between an object and the Earth. The weight of the object and amount of force applied affect the speed of the object.
Intro to Aeronautics (109-123)	OH	SCI.5.PS.1.2.a	Light travels and maintains its direction until it interacts with an object or when it moves from one medium to another, and then it can be reflected, refracted or absorbed.

### Exploring Aeronautics

### 2010 Science

### Academic Content Standards

<b>Ohio Science</b>			
<b>Grades 5-8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Tools of Aeronautics(257-326)	OH	SCI.5-8.5	Develop descriptions, models, explanations and predictions;
The Tools of Aeronautics	OH	SCI.5-8.5	Develop descriptions, models, explanations and predictions;
Science of Flight	OH	SCI.5-8.3	Use appropriate mathematics, tools and techniques to gather data and information;
Science of Flight	OH	SCI.5-8.5	Develop descriptions, models, explanations and predictions;
Integrating with Aeronautics	OH	SCI.5-8.4	Analyze and interpret data;
Intro to Aeronautics (109-123)	OH	SCI.5-8.3	Use appropriate mathematics, tools and techniques to gather data and information;
Intro to Aeronautics (109-123)	OH	SCI.5-8.4	Analyze and interpret data;
Scientific Method(124-144)	OH	SCI.5-8.2	Design and conduct a scientific investigation;

Scientific Method(124-144)	OH	SCI.5-8.3	Use appropriate mathematics, tools and techniques to gather data and information;
Scientific Method(124-144)	OH	SCI.5-8.4	Analyze and interpret data;
<b>Exploring Aeronautics</b>			
<b>2010 Science</b>			
<b>Academic Content Standards</b>			
<b>Ohio Science</b>			
<b>Grade 6</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fundamentals of Aeronautics (145-176)	OH	SCI.6.PS.1.1.a	Each atom takes up space, has mass and is in constant motion. Mass is the amount of matter in an object.
Fundamentals of Aeronautics (145-176)	OH	SCI.6.PS.1.3.a	Objects and substances in motion have kinetic energy.
Fundamentals of Aeronautics (145-176)	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
Wings(177-208)	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
Airplane Control(209-256)	OH	SCI.6.PS.1.1.a	Each atom takes up space, has mass and is in constant motion. Mass is the amount of matter in an object.
Airplane Control(209-256)	OH	SCI.6.PS.1.2.a	Atoms and molecules are not changed in structure when a substance undergoes a change of state; the amount of motion of the atoms and molecules is changed. Thermal energy is a measure of the motion of the atoms and molecules in a substance.
Airplane Control(209-256)	OH	SCI.6.PS.1.3.a	Objects and substances in motion have kinetic energy.
Airplane Control(209-256)	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
Science of Flight	OH	SCI.6.PS.1.1.a	Each atom takes up space, has mass and is in constant motion. Mass is the amount of matter in an object.
Science of Flight	OH	SCI.6.PS.1.2.a	Atoms and molecules are not changed in structure when a substance undergoes a change of state; the amount of motion of the atoms and molecules is changed. Thermal energy is a measure of the motion of the atoms and molecules in a substance.
Science of Flight	OH	SCI.6.PS.1.3.a	Objects and substances in motion have kinetic energy.
Science of Flight	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
Integrating with Aeronautics	OH	SCI.6.ESS.1.1.a	Minerals are naturally occurring, inorganic solids that have a defined chemical composition. Minerals have properties that can be observed and measured. Minerals form in specific environments.

Integrating with Aeronautics	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
Intro to Aeronautics (109-123)	OH	SCI.6.PS.1.3.a	Objects and substances in motion have kinetic energy.
Intro to Aeronautics (109-123)	OH	SCI.6.PS.1.4.a	An object's position and speed can be measured and graphed as a function of time.
<b>Exploring Aeronautics</b>			
<b>2010 Science</b>			
<b>Academic Content Standards</b>			
<b>Ohio Science</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
How an Airplane Flies	OH	SCI.7.PS.1.1.b	When substances are combined in a mixture, the new product may have different properties, but the amount of mass does not change.
<b>Exploring Aeronautics</b>			
<b>2010 Science</b>			
<b>Academic Content Standards</b>			
<b>Ohio Science</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Fundamentals of Aeronautics (145-176)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Fundamentals of Aeronautics (145-176)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Wings(177-208)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Wings(177-208)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Airplane Control(209-256)	OH	SCI.8.PS.1.1.a	Magnetic, electrical and gravitational forces can act at a distance.
Airplane Control(209-256)	OH	SCI.8.PS.1.2.a	The motion of an object is always measured with respect to a reference point.
Airplane Control(209-256)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.

Airplane Control(209-256)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
How an Airplane Flies	OH	SCI.8.PS.1.1.a	Magnetic, electrical and gravitational forces can act at a distance.
How an Airplane Flies	OH	SCI.8.PS.1.2.a	The motion of an object is always measured with respect to a reference point.
How an Airplane Flies	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
How an Airplane Flies	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
The Activity Center	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Science of Flight	OH	SCI.8.PS.1.2.a	The motion of an object is always measured with respect to a reference point.
Science of Flight	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Science of Flight	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Integrating with Aeronautics	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.